

**Amendments to the Specification:**

**On page 1, after the paragraph of CROSS-REFERENCE TO RELATED APPLICATION, please add the following paragraph:**

**INCORPORATION BY REFERENCE**

The material in the text file entitled "10552483SEQLISTING.txt", amended December 14, 2010 and being 1,080 bytes in size, is herein incorporated by reference in its entirety

**Please replace paragraph 0039 and Table 1 on page 11, with the following paragraph and Table 1:**

[0039] Differences in bacterial populations were assessed through use of FISH with oligonucleotide probes designed to target diagnostic regions of 16S rRNA. These were commercially synthesised and labelled with the fluorescent dye Cy3 (provided by Eurogentec UK Ltd). The molecular probes utilised were presented in Table 1. For total bacterial counts the nucleic acid stain 4,6-diamidino-2-phenylindole (DAPI) was used. Samples obtained from fermentation vessels were diluted in 4% (w/v) paraformaldehyde and fixed overnight at 4°C. The cells were then centrifuged at 1500 x g for 5 minutes, washed twice with phosphate-buffered saline (PBS; 0.1M, pH 7.0), resuspended in a mixture of PBS/99% ethanol (1:1 w/v) and stored at -20°C for at least 1 hour. The cell suspension was then added to the hybridisation mixture and left overnight to hybridise at the appropriate temperature for each probe. Hybridised mixture was vacuum filtered using a 0.2 µm Isopore membrane filter (Millipore Corporation, Herts, UK). The filter was removed, placed onto a glass slide with SlowFade (Molecular Probes, Eugene Eugene, Oreg., USA) and examined under a fluorescent microscope (~~Nieon~~ Nikon Eclipse, E400). The DAPI stained cells were examined under UV light and hybridised cells viewed using a DM510 filter. For each slide at least 15 different fields of view were counted.

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**TABLE 1.** Oligonucleotide probes used for the characterisation of gut microflora using FISH

<u>Probe</u>	<u>Sequence</u>	<u>Target genus</u>	<u>Temperature</u>	<u>Reference</u>
Bac 303	(SEQ ID NO: 1) 5'-CCAATGTGGGGGACCTT-3'	<i>Bacteroides</i> spp.	45°C	Langendijk <i>et al.</i> (1995)
Bif 164	(SEQ ID NO: 2) 5'-CATCCGGCATTACCACCC-3'	<i>Bifidobacterium</i> spp.	50°C	Manz <i>et al.</i> (1996)
Chis 150	(SEQ ID NO: 3) 5'-AAAGGAAGAUUAAUACCGCAUA-3'	<i>Clostridium histolyticum</i> group	50°C	Franks <i>et al.</i> (1998)
Lab 158	(SEQ ID NO: 4) 5'-GGTATTAGCA(T/C)CTGTTTCCA-3'	<i>Lactobaeillus/Enterococcus</i> spp.	45°C	Harmsen <i>et al.</i> (1999)